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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,861	09/06/2006	Joachim Prokscha	R.307204	3440

2119 7590 12/14/2007  
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ALEXANDRIA, VA 22314

EXAMINER
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DESAI, NAISHADH N

ART UNIT	PAPER NUMBER
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2834

MAIL DATE	DELIVERY MODE
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12/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/591,861

### Applicant(s)

PROKSCHA ET AL.

### Examiner

Naishadh N. Desai

### Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-15, 24, 26, 28-33 is/are rejected.
- 7) ☒ Claim(s) 16-23, 25 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/6/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on 9/6/2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terrone (US 4028573) in view of Muller et al (US 6983528).

3. As per (New) independent claim 14:

A primary element for an electrical machine, comprising:

a magnetically conductive body assembly from laminations resting axially on one another and having a plurality of axially extending teeth disposed in a star pattern (abstract of Terrone),

a winding of individual annular coils which are wound separately as coil-body-less air coils and thrust radially onto the teeth (Fig 2 of Muller et al),

a compensation element on at least one face end of the magnetically conductive body (Fig 1,6 of Terrone), the compensation element being elastically deformable in the axial direction of the tooth (abstract of Terrone) and being placed onto each of the face ends, located in a transverse plane to the body axis, of the teeth(Fig 1, 5 and 6 of Terrone), and the annular coil which is thrust onto the tooth being pressed axially onto the at least one compensation element (Fig 2 of Terrone); and

a closed ring element joining all the compensation elements together to make a compensation mask (Fig 2 ,9 and 17 of Muller et al).

Terrone teaches the device as claimed above. Terrone does not teach the coils to be air-coils or the use of a closed ring element that joins all the compensation elements together to make a mask. Muller teaches the use of air-coils and a closed ring element which joins all the compensation elements together. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Terrone to have air-coils and a closed ring element of Muller et al). The motivation to do so would be that it would produce a motor which is rather simple to

control, quite inexpensive, easy to maintain and have a high degree of efficiency (Col 1 ll 8-16 of Muller et al).

4. As per (New) dependent claim 15:

The primary element as defined by claim 14, wherein one compensation mask is provided on each face end of the magnetically conductive body (Fig 1 of Terrone).

5. As per (New) dependent claim 24:

The primary element as defined by claim 14, wherein the ring element (Fig 2,13 of Muller et al) is formed by a preferably thin-walled annular sleeve (Fig 2,17 of Muller et al), from whose outer wall the compensation elements protrude in a star pattern (Fig 2,15 of Muller et al).

6. As per (New) dependent claim 26:

The primary element as defined by claim 24, wherein the annular sleeve (Fig 2,17 of Muller et al)) and the compensation elements (Fig 2,15 of Muller et al) are made in one piece as a plastic injection-molded part (Col 4 ll 13-19 of Muller et al). Muller et al discloses a stator having a molded ring. Muller et al do not disclose the compensation elements to be molded with the ring as a one piece. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to mold the compensation elements together into a single piece together with the ring. The

motivation to do so would be that it would simplify assembly, reduce parts and complexity of the device.

compensation elements are made in one piece as a plastic injection-molded part.

Claims 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terrone (US 4028573) and Muller et al (US 6983528) in view of Uchida et al (US 5763978)

7. As per (New) dependent claims 28-30:

The primary element as defined by claim 14-16, further comprising one insulation strip each resting on the one hand between the long sides (Fig 3,32 of Uchida et al), facing away from one another (Fig 3 of Uchida et al), of the teeth and on the other between the inner long sides, oriented toward the aforementioned long sides(Fig 3 of Uchida et al), of the annular coils pressed onto the teeth(Fig 3 of Uchida et al).

Terrone teaches the device as claimed above. Terrone does not teach the coils to be air-coils or the use of a closed ring element that joins all the compensation elements together to make a mask. Muller teaches the use of air-coils and a closed ring element which joins all the compensation elements together. Muller does not teach the use of insulation strips. Uchida et al teaches the use of insulation strips. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Terrone and Muller to have the insulation strips of Uchida. The

motivation to do so would be to insulate the core electrically and allow desired flexural repulsiveness when force is applied or removed (abstract of Uchida)

8. As per (New) dependent claim 31:

The primary element as defined by claim 28, wherein one insulation strip is secured, preferably glued on, to each of the inner long sides, oriented toward one another, of the annular coils (Uchida et al disclose the use of insulating strips also it is well known in the art to use glue to attach or secure an element).

9. As per (New) dependent claim 32:

The primary element as defined by claim 28, wherein the insulation strips are angled, on the top side pointing outward of the annular coils (Fig 3,36 of Uchida et al), for the sake of covering these annular coils (Col 4 ll 51-62 of Uchida et al).

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terrone (US 4028573) and Muller et al (US 6983528) in view of Hsu (US 6400059)

10. As per (New) dependent claim 33:

The primary element as defined by claim 14, wherein the magnetically conductive body (abstract of Terrone and Fig 1 of Hsu) comprises a hollow-cylindrical short-circuit yoke (Fig 1,611 of Hsu), which is slipped onto the outward- pointing, free tooth faces of the teeth equipped with the annular coils (Fig 1 of Hsu).

Terrone teaches the device as claimed above. Terrone does not teach the coils to be air-coils or the use of a closed ring element that joins all the compensation elements together to make a mask. Muller teaches the use of air-coils and a closed ring element which joins all the compensation elements together. Muller does not teach a hollow cylindrical short circuit yoke. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Terrone and Muller et al to have the hollow cylindrical yoke slipped onto the teeth as disclosed by Hsu. The motivation to do so would be that it would reduce cost of motors and, provide higher efficiency (Col 1 ll 10-14 of Hsu).

#### ***Allowable Subject Matter***

11. Claims 16-23, 25 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior art references of the record, either stand-alone or in combination, teaches a DC motor having a U shaped transverse strut or an compensation element covering the teeth and having parallel ribs embodied on the outer face thereof .

#### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for details.

Application/Control Number:  
10/591,861  
Art Unit: 2834

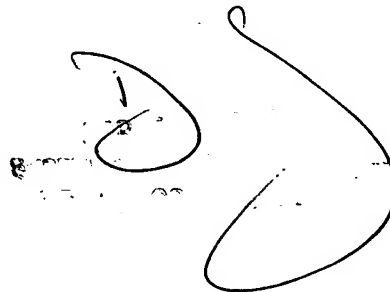
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naishadh N. Desai whose telephone number is (571) 270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Naishadh N Desai  
Patent Examiner

A handwritten signature in black ink, consisting of a stylized 'N' followed by a large, sweeping loop.